AMENDMENTS TO THE CLAIMS

Please amend the claims as indicated below.

1. (Currently Amended) A process for producing polymer moldings (M/T/B) with functional surfaces (O) for which

(I) a coating (B) is produced on a thermoplastic support sheet (T) by a process comprising

(I.1) coating one surface (T.1) of (T) with at least one pigmented coating material (B.1) and

(I.2) coating the resulting film (B.1) with at least one chemically or radiation curable coating material (B.2) to give the film (B.2) following its curing a transparent coating (B.2),

(II) inserting the resulting coated thermoplastic support sheet (I/B) into an open mold,

(III) closing the mold and contacting the uncoated side (T.2) of the coated thermoplastic support sheet (I/B) with a liquid polymeric material (M) to shape the coated thermoplastic support sheet (T/B) and join it firmly to the polymeric material (M), and causing the polymeric material (M) to solidify, and

(IV) removing from the mold, the resulting coated polymer molding (M/T/B), whose coating (B) is uncured, part-cured or full-cured; ~~where~~and

(V) fully curing in or after at least one of step (I), step (III), or step (IV) the uncured or part-cured coating (B) or aftercuring ~~step (IV)~~ the full-cured coating (B) ~~is aftercured~~after step (IV);

wherein the coating (B) being covered at least temporarily with a protective sheet (S), wherein the protective sheet (S) has

(s.1) a storage modulus E' of at least 10^7 Pa in the temperature range from room temperature to 100° C,

(s.2) an elongation at break >300% at 23° C longitudinally and transversely to the preferential direction produced by means of directed production processes in the production of (S),

(s.3) a transmittance >70% for UV radiation and visible light with a wavelength of from 230 to 600 nm for a film thickness of 50 μm;

and wherein the coating (B)-facing side (S.1) of the protective sheet (S) has

(s.1.1) a hardness <0.06 GPa at 23° C and

(s.1.2) a roughness corresponding to an R_a ~~from~~value over a sampling area of 50 μm^2 of <30 nm as determined by means of atomic force microscopy (AFM).

2. (Original) The process as claimed in claim 1, wherein the protective sheet (S)

(s.1) has a storage modulus E' of from 10^7 to 10^8 Pa.

3. The process of claim 1, wherein the protective sheet (S)

(s.2) has an elongation at break of from 400 to 900%.

4. (Previously Presented) The process of claim 1, wherein the coating (B)-facing side (S.1) of the protective sheet (S)

(s.1.1) has a hardness <0.02 GPa.

5. (Previously Presented) The process of claim 1, wherein

(s.5) the removal of the protective sheet (S) from the coating (B) requires an averaged force <250 mN/cm.

6. (Previously Presented) The process of claim 1, wherein the protective sheet (S) is selected from the group consisting of films made of polyethylene, polypropylene, ethylene copolymers, propylene copolymers, and ethylene-propylene copolymers.

7. (Previously Presented) The process of claim 1, wherein the side (S.1) of the protective sheet (S) has adhesive properties.

8. (Previously Presented) The process of claim 1, wherein the side (S.2) of the protective sheet (S) that faces away from the coating (B) has antiblocking properties.

9. (Previously Presented) The process of claim 1, wherein the protective sheet (S) is constructed from a plurality of layers.

10. (Previously Presented) The process of claim 9, wherein the protective sheet (S) is constructed from at least one core layer (KNS) made of at least one homopolymer or copolymer and from at least one further layer selected from the group consisting of adhesive layers (KS) and antiblocking layers (AS).

11. (Previously Presented) The process of claim 10, wherein the homopolymers and copolymers of the core layer (KNS) are selected from the group consisting of polyethylene, polypropylene, ethylene copolymers, propylene copolymers, and ethylene-propylene copolymers.

12. (Previously Presented) The process of claim 1, wherein the thickness of the protective sheet (S) is from 10 to 100 μm.

13. (Previously Presented) The process of claim 1, wherein the protective sheet (S) is applied to the coating (B) after step (I).

14. (Previously Presented) The process of claim 1, wherein the protective sheet (S) is removed from the coating (B) of the coated, thermoplastic, protective-sheet (S)-covered support sheet (T/B/S) immediately before step (II).

15. (Previously Presented) The process of claim 1, wherein the protective sheet (S) is removed from the coating (B) of the protective sheet (S)-covered polymer molding (M/T/B/S) after step (IV).

16. (Currently Amended) The process of claim 15, wherein the protective sheet (S) is removed from the coating (B) at least one of before or after the coating (B) has been fully cured or before or after the molding (M/T/B) has been aftertreated.

17. (Previously Presented) The process of claim 1, wherein the thermoplastic support sheet (T) has a film thickness $\geq$ 0.5 mm.

18. (Previously Presented) The process, claim 1, wherein the coated thermoplastic support sheets (T/B) or the cut-to-size pieces thereof are preformed prior to step (II).

19. (Previously Presented) The process of claim 18, wherein the coated thermoplastic support sheets (T/B) or the cut-to-size pieces thereof are adapted to the contours of the molds.

20. (Previously Presented) The process of claim 1, wherein the functionality of the surface (O) of the polymer moldings (M/T/B) is one which imparts at least one of color, effect electroconductivity, magnetic shielding, inhibition of corrosion, fluorescence or phosphorescence.

21. (Previously Presented) At least one of means of transport, constructions, windows, doors, furniture, and utility articles comprising the polymer moldings produced by the process of claim 1.

22. (Currently Amended) A protective sheet for production of polymer molding comprising a sheet having

(s.1) a storage modulus E' of at least 10^7 Pa in the temperature range from room temperature to 100°C,

(s.2) an elongation at break >300% at 23° C longitudinally and transversely to the preferential direction produced by means of directed production processes in the production of (S),

(s.3) a transmittance >70% for UV radiation and visible light with a wavelength of from 230 to 600 nm for a path length of 50 μm

where at least one surface of the sheet has

(s.1.1) a hardness <0.06 GPa at 23° C and

(s.1.2) a roughness corresponding to an R_a ~~from~~over a sampling area of 50 μm^2 of <30 nm as determined by means of atomic force microscopy (AFM).